PART VIL BY JORL CHANDLER HARRIS. Copyright, 1894, by Joel Chandler Horris. XIV.

The constellations swept slowly westward. A bright star stood over against one of the wide shimners that, seen from the rose garden, wore the semblance of a turret. The star glistened there a while and then gave place to the moon, Uncle Cato seated himself on the steps and Blind Shack sat there beside him. Otis Maxwell was half reciting on a garden seat. For was made. After awhile Shack shifted his feet

about unesally.
"Unk Cato, how come it, you speck?" he "Lord he'p my soul, chil', don't ax me dat!" exclaimed Uncle Cato.
"Hit sho is rank gwines on," suggested

Shack, after a long pause,
"Wuss'n any war," said, Uncle Cato. "Maybe young marster dar kin tell sumpin" "bout it," remarked Shack.

"Heavens and earth, no!" oried Otis Max-well. He rose and walked up and down ex-stedly. "I wish I knew! I wish I knew!"

"Well, suh," and Uncle Cato, solemnly, "sf mybody had 'a' to! me dat judgment day wus somin' dis night I mought er b'lieved um; but ef anybody had 'a' to! me dat dish yer—dish yer what's is name" (he could find no word to ext um. Yusser! I'd 'a' flung my head back an' aughed at um."

"Yit dar 'tia," was Shack's comment. "You done seed it."
"I done seed it wid my own eyes," said Uncle

Cato. "Wid my two eyes. I wus lookin' right at um. Dar was young mistiss"—he motioned with his left hand—"an' here wus dat ar Mr. Bessley "he motioned with his right hand-"an' den young mistiss went off wid 'im. I sould 'a' retch ont au' totch um wid my han'."

"Hit bangs my time!" exclaimed Shack.
"I don't keer how long you live nor how ol you git," remarked Uncle Cato, resting a hand on Shack's shoulder, "don't you never fergit yo'se'f an' tell marster dat Cato stood dar an' let young misties go off wid dat ar white man. Don't you never do it! Don't you never dast ter do it!"

"Dey's gwine ter be trouble, sho," said Shack. "Honey!" responded Uncle Cato with peculiar emphasis, "don't call it dat! Trouble ain't no name! Ef you hear Marster hollerin' fer Cate in de mornin' don't you say nothin'. Ef he ax you pintedly whar I'm at, you tell 'im ol' Cate gone—done gone. You des letch yo' hut an' make a bow' an' say, 'Marster, dat ol' nigger man done leaked out fum dis place.' But ef he

make a bow' an' say, 'Marster, dat ol' nigger man done leaked out fum dis place.' But ef he don't ax you, don't say nothin'. Man! don't tell me! Ef dat ar Beasley man is on top er de geoun', marster gwine ter git 'im."

"Why didn't you wake Gen. Herndon when you saw what was happening!" asked Otis Maxwell. with somewhat belasted indignation.

"Well, sah," replied Uncle Cato, "Miss Crissy wus dar, an' she's a white 'oman. Look like she mighter know what she doin'. I done tuck notice dat de nigger dat raises a fuss twix 'white folks moe' inginer'lly gits de butt cen' er de trouble."

"Dat's so!" Shack assented.

"Yasser!" said Uncle Cato, "it's de Lord's pufe! Ef my young mistis had 'a 'come out dar by 'erself, &boun', you I'd a know'd what to 'a' done. I'd a hollered at 'er like I use ter do when she wur a little gal, en ef dat hadn't 'a' done no good. I'd 'a' tuck 'er by de han' an' a kyar'd 'er in de house ter marster. I been done 'er dat sway many an' many's de time. She use ter min' me when I hollered at 'er, an' I believe she'd a minded me dis night ef dev hadn't 'a' been nobody dar but me an' dat ar white man. She bleedge ter know she ain't doin' right."

"But dar wur Miss Crissy," sugrested Shack. "You hear how she talk back at me?" said Uncle Cato. "She sho' had 'er bristles up."

"Oh, what a missrable piece of business it is!" eried Otis Maxwell.

"I dunner what de name er de Lord marster gwine do," Uncle Cato went on in a grieved fone. "Ef he don't run start crary he'll fool me. You know how he done when mistiss diet!"

"I hear talk," replied Shack, "but I had no business roun' here when dat wur gwine on. I went in de woods myself. You know dat ar shuck-pen in de two-mile piace? Well, I crope in dar and kiver'd myself up, an' stayed dar two days an' two nights."

"Ah Lord! I wish I'd 'a' been wid you," said Unole Cato. "I had to stay right here an' watch after marster. Ef I hadn't 'a' watched 'im, he'd 'a' she hurted hisself. Mistiss gone, and now young mistiss gone. One dead, en de yuther good ez dead

breakfast hour.

Returning to the rose garden in the broad light of day, he tried to convince himself that he was the victim of a wild and foolish dream, and yet there was the ladder on which he had climbed into the library. Uncle Cato had gone off and left it lying near the steps. Yes, and there in the garden seat, where he had dropped it, was the document he had found—the deed with which he had intended to confound Beasit, was the document he had found—the deer with which he had intended to confound Beasley. The deed and the duplicate were pinned together, and he had found them, by the merest accident, in a copy of Horace, where they had evidently been used a bookmark. Near them were the roses that Ethel had held in her hands. He placed the papers in his pocket, and left the poor roses where they were. He realized, with something of a shock, that he was done with sentiment for a long while, if not forever.

After a little, Gen. Herndon came forth from the house. He appeared to be in a mood unusually gay for him. He waked briskly, huming a tune.

the house. He appeared to be in a mood unusually gay for him. He walked briskly, humming a time.

"Well, sir," he exclaimed, when he saw Otis Maxwell. "I am sorry you were not at breakfast, I regard it as the most important meal of the day, especially at this season. Topped with fresh fruit of some kind, it is the foundation of health in our climate. For a rarity we had figs this morning, and they were really delicious."

"I am not feeling well," said Maxwell, "but the figs would have been a great temptation to the appetite."

"Usually figs do not ripen so early," remarked the General, "but these were from a tree imported from Ceylon by my grandfather. They are exquisitely flavored. But, my dear sir," he cried, regarding his guest with an air of solicitude, "you do not look well at all. You are pale, and—yes, your hands are feverish. Come! this will never do. You must permit me to sphysic you. We have the finest climate in the world, but occasionally we have to fortify ourselves with a tonic of some kind. My mint bed is a sufficient basis for mine. For you I shall recommend a temperate and judicious mixture of Bourbon and wild cherry bark. It is quite equal to quinine, and is not so bitter in the mouth. We must never have it said that you were allowed to become ill at Herndon Wood. It will never do in the world. My daughter was somewhat indisposed last night, but I insisted that she should cat some figs I sent her. I hear she is better now. Almost well, indeed."

Maxwell groaned inwardly. He did not know what to do or any. Was it possible that this old man didn't know that his daughter was gone—gone?

"Why, you look haggard!" exclaimed the

gone gone?
"Why, you look haggard!" exclaimed the

gone—gone?

"Why, you look haggard!" exclaimed the General.

"I have had a terrible night," replied Maxwell. "I have not been able to close my eyes."

"I can sympathize with you heartily," said Gen, Herndon, "I have been troubled with it frequently. It is the foc of health, sir—the foc of health. We must find a remedy promptly."

"Alas!" thought the young man, "there is only one remedy," but he said nothing.
"As for me," Gen, Herndon went on, "I never felt better. They say, you know, that old men will dream dreams and behold visions. I had dreams last night, and remarkably pleasant ones they were. I dreamed of my old friend Maxwell of Boston; and it was very queer. I was what I am, and yet a boy again. I was in some great trouble; there was some impending danger. My old friend was somewhere near, but he seemed to be but a shadow. He would have helped pre if he could, but he was powerless. Presently his son appeared, light in his eyes and a smile on his face, and all my troubles suddenly vanished, as they frequently do in dreams. My daughter was there, and the young man took her hand, and the two went laughing along together—laughing and showing me the way."

Otis Maxwell moved about uneasily. He suffered tortures.

"It was a foolish dream, but a pleasant one." (sen, Herndon went on, "It is strainge, too; the Otla Maxwell moved about uneasily. He suffered tortures.

"It was a foolish dream, but a pleasant one,"
Gen. Herndon went on, "It is strange, too; the
happiness that came to me in my dream pursues me in my waking hours."

He had been looking far away through the
trees as he apoke, but now he turned to his
guest and the smile vanished from his face.

"Why, you are pale, sir!" he exclaimed.

"You are all trembling! This will never do;
let me assist you to your room."

Hut outs Maxwell protested that he would do
better in the open air.

"You must remain quiet, sir," said the General. "You are under my orders; no prospectbut expedition to day; perfect rest for the time.
I helst upon it."

"You are right, General," replied the young

meist upon it."
"You are right, General," replied the young an, "I shall take care not to exert myself man. "I shall take care not to exerc mysest unnecessarily."

I must look after some plantation matters, "all must look after some plantation matters, said tien. Heredon; "but, remember! perfect rest; no walking in the sun."

Oils Maxwell watched the old gentleman as he walked away. He was as erect and as uncompromising in his attitude as though on dreas paradle. The joung man watched him disappear from view, and thought what a rudo awakening he would have when he found his daughter gone. But, after all, what did it matter? If alle were ten times his daughter Gen.

Hernden could not possibly be as unhappy as Otis Maxwell was. So thought this young Bostonian. He had the vanity and conceit of all true lovers.

He leaned his head against the back of the garden seat and closed his eyes. How long he remained in that position he never knew. He must have dozed. When he raised himself from the sleep or lethargy into which he had fallen, he heard voices. They sounded far away, and yet he could hear every word that was said as plainly as if it were spoken at the very door of his ear. He kept his eyes closed. He heard the voice of Ethel, and thought he was dreaming: then he heard the voice of Ethel, and thought he was dreaming: then he heard the voice of Mrs. Fincannon, and thought how real a dream could be. Ethel had made some remark in a low tone, but what she said was drowned by the harsh but friendly voice of Mrs. Fincannon, As the conversation went on Otis Maxwell found that he was not dreaming, but very wide awake. Opening his eyes, he could see the white of Ethel's dress gleaming through the rose vines. She was sitting on the veranda, and Mrs. Fincannon was sitting an aimini for what he can do an what he can't. He might take the whole plantation an' tote it off to perdition where he belongs, before I'd stan' by an' see him bennean you by axin' you to marry him. He marry you!

"Het think of the harm he can do i' said Ethel. Her voice fell on Otis Maxwell's ear like a strain of sweet music. Was his night's experience a waking nightmare?

"Well, think of the harm he can do I' said Ethel. Her voice fell on Otis Maxwell's ear like a strain of sweet music. Was his night's experience a waking nightmare?

"Well, think of the harm he can do I' said Ethel. The poppy. Why, supposin' he had 'a' know'd that man had axed you to marry him! He'd 'n' got he'd a shot hisself."

"Oh! I wish I had been born a m

"What did no do? Ettal breathlessip.
"Why, he couldn't 'a' done no wass if he'd 'a' been kin to you. A little more an' I believe in my soul he'd 'a' fit me."
The situation was getting somewhat embarrassing for Otis Maxwell. He rose and made a great pretence of yawning.
"I think I have been asleep," he said, as he

"I think I have been asleep," he said, as he went forward.

"Good morning, Mr. Otis." Ethel's greeting was timid and doubtful, and her face was slightly flushed.

"Oh. I am better, much better," he replied. He was too embarrassed to remember that neither Ethel nor Mrs. Fincannon knew that he had made a pretence of Illness.

Mrs. Fincannon regarded him curiously.
"So you took me for a fool, did you, honey?" asked Aunt Crissy, when she caught his eye.
"Well, jest le' me tell you: man or woman, young or old, the livin' human bein' that picks your Aunt Crissy up for a fool will put her down ag'in without any tellin."

"Madam," replied Maxwell in a tone, the sadness of which could not be mistaken, "there is but one fool here. I brought him with me when I came, and I shall take him away with me when I go. He will not vex you much longer.

"Don't let that worry you, honey," said Mrs. Fincannon, carnestly and kindly. "Stayin' or gwine I wish you mighty well, an' I know some other folks that'll jine me in the wish." Ethel made a gesture of protest that Otis Maxwell did not observe—a part of the system of feminine telegraph men are too dull to understand.

What Otis Maxwell would have replied, or what Mrs. Fincannon would have said furtherfor ahe was as ready with her sympathy as she was rough with her criticisms—must necessarily be left to conjecture. The situation was an embarrassing one for the two young people, and it needed only the quick and sharp tongue of Mrs. Fincannon to plunge them into new complications. But at the proper moment—in the very nick of time—the attention of all three was attracted by a rustling and shuffling in the rose garden, accompanied by a whining voice giving utterance to some heartrending complaint.

It was the voice of Larceeny, and this interesting negro girl came toward the house as rapidly as she could make her way through the rose bushes. She walked with a slouching stagger, as if her legs were too weak to support her body. Her face wore an expression of fatigue and distress, and as she came nearer it was plain to see that she had been a participant in some exciting adventure.

"Well, the stars above." exclaimed Mrs. Fin-

and distress, and as she came to see that she had been a participant in some exciting adventure.

"Well, the stars above:" exclaimed Mrs. Fincannon, lifting her hands in amazement. "Did anybody ever see the beat of that? Have the dogs had you?"

The expression of abject woe on Larceeny's face despened, but she made no answer. She was in a bedraggled condition. The skirt of her dress was ripped from hem to waist, and a part of, it was carried on her arm to keep it from dragging on the ground. On the other arm she carried a dilapidated hoopskirt. She staggered forward and half fell on the steps, where she lay as though utterly exhausted.

"What is the matter with her?" inquired Otis Maxwell with some solicitude.

"Nothin' in the roun' world," replied Mrs. Fincannon. "She's wasn'n possum for puttin' on."

on."
"Yes'm, dey is sump'n de matter! Yes'm dey
is!" cried Larceeny with some show of indignation. "You done gone an' got me inter dis
trouble, an' now you say dey sin't nuthin' de
matter. Yes'm, dey is sump'n de matter."
"Somebody's hurt her feelin's, I reckon," said There was evidently a humorous side to the uation that Otis Maxwell did not s thel was trying to refrain from laught drs. Fincannon was laughing as hard as

situation that Otis Maxwell did not see, for Ethel was trying to refrain from laughing, Mrs. Fincannon was laughing as hard as she could.

"Oh, you all may laugh, but you got ter pay me! You sho is."

"Hush up, you everlastin' gump!" exclaimed Mrs. Fincannon. "You'll make these folks think you are crasy. Mr. Otis, le' me interduce you to old Beasley's bride!"

"No'm, I ain't, nuther! Miss Crissy, you ought ter be 'shame er yo'se'f! Dat white man never is ter lay eyes on me ag'in—not ef I knows it—kase he'll kill me sho!"

At last Otis Maxwell understood the situation. The mystery of the clopement was made plain to him. He turned his eyes on Mrs. Fincannon and gave her a glance of unmixed admiration. "Aunt Crissy! he exclaimed enthusiastically, "you have taken me by storm. You have overpowered me. You are a wonderful woman!"

"Oh, thanky, thanky!" replied Mrs. Fincannon, making a sarcastic little courtesy. "I'd blush if I could, but my blushin' days are over. I'll have to git Miss Herndon here to do my blushin'. But don't fergit it off of your mind that I sin't a bit more wonderful this minnit than I was issat night."

Mrs. Fincannon went down the steps, took the hoopskir from the negro girl, and tucked it out of eight under her apron.

"I was greatly troubled last night, Aunt Crissy. You must pardon me." This was Otis Maxwell's apology.

"I don't bear no grudges." returned Mrs. Fincannon. "I know you men folks too well for that. You're all so uppity an' biggity."

"You shall be paid," said Otis Maxwell.

"Otid old Beasley do any courtin' after he got you shall be paid," said Otis Maxwell.

"Ot shall be paid," said Otis Maxwell.

"Otid old Beasley do any courtin' after he got you in the buggy?" asked Mrs. Fincannon in her matter-of-fact way.

"Oh, Aunt Crissy! how can you?" cried Ethel in a shocked toue.

Lurceeny flung her head back and laughed aloud as

Did out Beastey do any courtin' after he got you in the buggy?" asked Mrs. Fincannon in her matter-of-fact way.

"Oh. Aunt Criss?! how can you?" cried Ethel in a shocked tone.

Lurceeny flung her head back and laughed aloud as only a negro can. Then she suddenly grew contemptuous.

"He look like courtin'!"

"What did he do?" persisted Mrs. Fincannon.
"He tuck 'n holp me in de buggy, an' den he got in dur hisse'. He cluck ter de hoss an' den he guinter sidle t'ards me an' snuggle up close. I dunner what de name er goodness all him!"

"I wish you'd a had my durnin' needle an' a jabbed it in 'im!" exclaimed Mrs. Fincannon.
"He sidle up an' aidle up, he did, twil he look like he gwine ter push me out'n de buggy. He do so funny he fill me full er laugh, an I speck I anickered, kaze he pat me on de shoulder an' tell me not ter cry. I dunner how come it, but every time dat man tetch me hit make de col' chills run down my back. He lean on me like he too tired to set up straight. I was settin' right spang on de sidge. Himeby he put one arm 'roin' me an' sorter squoze me up."

"Did anybody ever hear the beat of that?" exclaimed Mrs. Fincannon, indignantly. "The owdactous villun!"

"Yes'm." said Larceeny, emphatically: "an' dat got me skeered. I ain't know what dat white man gwine do; whedder he gwine choke me er blie me, an' I des fetch one squall an' Jerk myse'f loose. I holler out. 'Go way, man.' an' den I fair turnt a back somerset out'n dat buggy. Dis skeer de hoss, an' he went thro' de woods like he tarin up de trees. I tell you now, I'm fear'd er dat man. His eve look right green."

"Well, where 've you been all this time?"

"I been in the woods' I run'd clean over ter de two-mile place an' hid in de shuck pen, un dar I stayed twil I 'gun ter git hongry. I wish you'd piecase man mg' me dem ar chicken glazards you say you gwine save for me.

"Well, come on an' le' me take off them duds." Mrs. Fincannon was both practical and economical. "You've in-about ruin' en. Now, that was a right good dreas when you let here ia

FOOD IN THE YEAR 2000. OUR MILK, EGGS, FLOUR, AND MEAT TO BE MADE IN PACTORIES.

Stace Cows and Brass Boofstonk Machines -Artificial Tobacco, Ten, Coffee, and Cho colate-Genniae Factory Made Foods

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Pants, July 18.—All the ingenious prophets, from Bellamy to Astor, who have foretold the extraordinary conditions of the year 2000 A. D., and deeply interesting question, namely, "What is the Man of the Future Going to Eat?" This particular prophecy has now been undertaken, not by an imaginative writer, but by one of the greatest living men of science, Prof. Berthelot for his scientific eminence and the undeniable facts upon which he bases his forecast, his predictions would pass the limits of human be-lief. Marvellous as it may seem, the people of the future, in countless millions, will be fed by means of air, water, and carbon. Four simple elements, carbon, hy-drogen, oxygen, and nitrogen, universally distributed over the earth, are to furnish, in chemical combination, all foods now known, other foods not yet known, and all the flavore and essences which make eating a luxury. The epicure of the future is to dine upon chemical meat, chemical bread, and chemical vegetables, drink chemical wines and liqueurs, and round off his repast with a chemical tobacco, beside make a very poor showing. Wheat fields and corn fields are to disappear from the face of the earth, because flour and meal will no longer be grown, but made. Herds of cattle, flocks of sheep, and droves of swine will cease to be bred, because beef and mutton and perk will be manufactured direct from their will be manufactured direct from their elements. Fruits and flowers will doubtless continue to be grown as cheap decorative luxuries, but no longer as necessities in food or ornsment. There will be no grain or cattle or coal cars in the great air trains of the future, because the fundamental food elements will exist every-where, and will not require transportation. Coal will no longer be dug, except perhaps with the object of transforming it into bread or meat. All the big engines of the great food factories of the future will be driven, not by combustion, conderful and magical changes which have been promised and prophesied concerning the conditions of human life in the centuries before us, pale into insignificance before the strange alrations which are destined to transform our titchens and our dinner tables, and these are pretold and described, as will be read below, in the dry, exact language of science and based apon undeniable facts.

The articles of diet now‡n common use consist

almost entirely—the percentage of other ele-ments being minute—of carbon, hydrogen, oxygen and nitrogen. These four elements, univer-sally existing, are destined, the theory is, to furthe rapid and steady advance of synthetic chemwhich takes the elements of a given compound compound. It is the reverse of analytical chemstry, which takes a given compound and dissociates and isolates its elements. Analytical chemstry would separate water into oxygen and hydrogen, and synthetic chemistry would take oxy-gen and hydrogen, mix them, put a match to the nixture and thus form water. Synthetic chemistry has already progressed so far that sev-eral great agricultural industries have been de-stroyed by its advancement, compounds which were once obtained by plant growth in the fields being now furnished entirely by chemical labortories and direct manufacture. In fact the clear evidence of the present leaves no room for in the future synthetic chemistry will destroy

the grain fields and cattle ranges of to-day.

PROP. BERTHELOT AND HIS ENVIRONMENT. No man is more entitled to act as a prophet in this field than Prof. Berthelot. If not the ather, he is certainly the foster father of synthetic chemistry as a special actence, and for the scientific army in the invasion of an unknown territory, from which astonishing results have every now and then been reported. In every way open to a grateful nation, France has loaded him with honors. He is Member Sciences, Member of the Institute, and Grand officer of the Legion of Honor. He is Director-General of the Higher Education, President of the Committee on Explosives, and in 1870 was President of the Committee on the Defence of Paris. As a Cabinet Minister he has had while as a lifelong chemist he has enjoyed the best opportunities of considering the industrial changes which affect their condition, many of

while as a lifelong chemist he has enjoyed the best opportunities of considering the industrial changes which affect their condition, many of the great manufacturing advances which have euriched latter-day Prance having been due directly or indirectly to his own chemical researches. Consequently his predictions in this new field have a very important and practical value, and an interview upon the subject, which he was good enough to accord to the writer, proved to be unique and fascinating of its kind. To romance and rhapsedize concerning the future is not very difficult, but to accurately foresee and forstell its conditions is an accomplishment only to be found among the followers of those sciences which are held to be exact. The is a great stretch of old brown-stone buildings on the Quai Malaquia, its bare and barren courtyards being paved with many square feet of gray-stone blocks. The coldness of the environment, after you have traversed two of these courtyards to the last doorway on the right, is dissipated by the cheery amile of a stout Herton sewing woman, who ushers you without delay through a long, dark corridor to a small dark study at the end. Here, surrounded by books which cover the walls on all four sides, and the proposition in the life the same and the last doorway on the right, is dissipated by the cheery amile of a stout Herton sewing woman, who ushers you without delay through a long, dark corridor to a small dark study at the end. Here, surrounded by books which cover the walls on all four sides, as the last the same and the last doorway on the right, is dissipated by the cheery amile of a stout Herton sewing woman, who ushers you without dark study at the end. Here, surrounded by books which cover the walls on all four sides, and the proposition of our staple foods, which we now obtain in the life being all that is required to arouse his interest and uncleak his store of strange and interrecting facts. The interview is had pursuant to an appoint ment, and the proposition of the proposition

referring to his address of April 5 before the Society of Chemical and Mechanical Industries. COMPOUNDED TABLETS IN PLACE OF BREFEREARS IN THE YEAR 2000.

"That address," he says, "was in the nature of an after-dinner speech rather than a sclentific pronouncement. We do not use the drier language of science upon festive occasions. I was speaking, however, to an association of chemists, and I believe that all I predicted upon that occasion will in the process of time, say the year 2000, be actually or approximately the existing state of affairs. I said that new sources of mechanical energy would largely replace the present use of coal, and that a great proportion of our staple foods, which we now obtain by natural growth, would be manufactured direct, through the advance of synethic chemistry, from their constituent elements, carbon, hydrogen, oxygen, and nitrogen. I not only believe this, but I am unable to doubt it. The direction of our present progress is along an easily discerned line, and can lead to only one end."

"Do you mean to predict that all our milk, eggs, mest, and four will in the future be made in factories?"

"Why not, if it proves cheaper and better to make the same materials than to grow them? The first steps, and you know that it is always the first steps and you know that it is always the first steps and you know that it is always the first steps and you know that it is always the first steps and you know that it is always the first steps could be a same will in the future be made in factories?"

"Why not, if it proves cheaper and better to make the same materials than to grow them? The first succeeded in making fat direct from its elements. I do not say that we shall give you stifficial beefsteaks at once, may do I say that we shall ever give you the beefsteak as we now obtain and cook it. We shall give you the same identical food, however, chemically, digestively, and nutritively speaking. Its form will differ, because it will probably be a tablet, but it will be a tablet of any color and

composition."
This declaration from so high an authority was somewhat staggering. It was an unexpected blow at a tonder (usually tender) and long-loved household idol. The common or garden beefsteak anddenly took upon itself a poetry and a pathos in the mind of the writer, which

could only have been born of its prospective supersannuation. The idea of giast cove and bran beefsteak machines was truly scientific, but there was a lack of poetry in it which was scarcely modified by the hope that the beef-sicaks of the future might, could, and would be the reverse of tough.

THE PRESENT IMPORTANCE OF CHEMISTRY IN

"To comprehend what I mean by the tendency of the time," continued Prof. Berthelot, "you must consider the long evolution which has characterized the development of foods and the major part which chemistry has played therein. The point is, that from the earliest time we have steadily increased our reliance upon chemistry in food production, and just as steadily diminished our reliance upon nature. Primitive mean ate his food and vegetables raw. When he began to cook, when he first used fire, chemistry made its first intrusion upon the sphere of nature. To-day the fire in the open air has been replaced by the kitchen. Every cooking utenell now used represents some one of the chemical arts. Stoves, saucepans, and pottery are the results of chemical industries. So, also, modern cookery uses an indefinite number of compounds, food compounds, which, like sugar for instance, have been subjected to a more or less complex chemical treatment in their journey from the field in which they grew to the kitchen in which they are used. The ultimate result is clear; chemistry has furnished the utensils, it has prepared the foods, and now it only remains for chemistry to make the foods themselves, which it has already begun to do."

CHEMICAL POSSIBILITIES BOUND TO BECOME

the utensils, it has prepared the fords, and now it only remains for chemistry to make the foods themselves, which it has already begun to do."

CHEMICAL POSSIBILITIES BOUND TO BECOME COMMERCIAL POSSIBILITIES.

Before proceeding to describe what synthetic chemistry has already done in this direction the Professor said, by way of preface:

"There is a distinction which I would like to make at this point between the laboratory stage and the commercial stage of any given discovery in food making. From the scientific standpoint the laboratory result is the important one. As you and all the world know, the commercial result follows inevitably in time. Once science has declared that a desired end is attainable the genius of invention fasters upon the problem, and the commercial production of the result slowly attains perfection by gradually improved processes at less and less cost. Take aluminium, for instance. Once a very expensive metal, its steadily decreased cost in production is bringing it within the reach of all. The use of sugar is universal. Sugar has recently been made in the laboratory from glycerine which I first made direct from synthetic sloohol. Commercial snow taken up the question, and I see that an invention has recently been patented by which sugar is to be made upon a commercial scale from two gases, at something like one cent per pound. As to whether or not the genilemen who own the process can do what the inventor claims, it is neither my province nor my desire to express an opinion. It may be that the commercial synthetic manufacture of sugar is a more difficult task than they imagine. I have not the slightest doubt, however, that augar will eventually be manufactured on the largest scale synthetically, and that the culture of the sugar cane and the best root will be abandoned because they have ceased to pay. Look at alizarin. There is one result of the same kind that synthetic chemistry has already brought about."

"What is allisarin?"

GREAT AGRICULTURAL INDUSTRY DESTROYED BY THE CREMISTS.

BY THE CHEMISTS.

"Alizarin is a compound whose synthetic manufacture by chemists has destroyed a great agricultural industry. It is the essential commercial principle of the madder root, which was once used in dyeing wherever dyeing was carried on. The madder root was grown to an enormous extent in Persia, India, and the Levant, and spread from there to Spain, Holland, and the Rhine provinces. Continental Europe used it in enormous quantities, and twenty years ago its annual import into England was valued at \$6,250,000. The discovery was made, however, that alizarin could be manufactured synthetically, and the artificial production of R has so far supplanted the natural that the madder fields, so far as Europe is concerned, have practically cased to exist. So with indigo. The chemists have now succeeded in making pure indigo direct from its elements, and it will soon be a commercial product. Then the indigo fields, like the madder fields, will be abandoned, industrial laboratories having usurped their place. trial laboratories having usurped their pla TEA, COPPER, AND COCOA MIGHT IN MADE NOW

TEA. COFFEE, AND COCOA MIGHT ME MADE NOW.

"So far as dye stuffs were concerned, the intervention of chemistry seemed not unnatural. They were chemical products and seemed to fall naturally into the sphere of the chemist. When it came to tobacco and tea and coffee, however, synthetic chemistry appeared to be getting nearer home, invading the family circle, so to say. It appeared, however, that not only are tobacco and tea and coffee to be manufactured directly and artificially, but there is substantial promise that such tobaccos, such teas, and such coffees as the world has never seen will be the outcome. This promise may be understood in two ways, but the highest superlative is the degree in which it is to be taken, and the development of the point was full of interest. "Tea and coffee could now be made artificially," he said, "if the necessity should arise, or the commercial opportunity, through the necessary supplementary mechanical inventions, had been reached. The essential principle of both tea and coffee is the same compound. The difference of name between theins and caffeine has arisen from the sources from which they were obtained, but they are chemically identical in constitution. It has often been made synthetic ladder is as follows:

"Carbonic oxide and chlorine make carbonyl chloride." Carbonyl chloride and ammonia make ures."

chloride.
"Carbonyl chloride and ammonia make urea,

chloride.

"Carbonyl chloride and ammons.

"Uric acid transforms into xanthine.

"Uric acid transforms into xanthine.

"Anthine yields theobromine.

"Theobromine yields theine of caffeine.

"Theobromine, you remember, is the essential principle of cocoa. Thus, you see, synthetic chemistry is getting ready to furnish, from its laboratories, the three great non-alcoholic beverages in general use. The tea plants, coffee erages in general use. The tea plants, coffee

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"HELP" IS PLENTY AND BAD.

HELP IS PLENTY AND BAD.

DIFFICION OF LABOR IN A WEST INDIAN HOUSEROLD.

The Government Lamindress in High-heeted Shees - The Mutter Keeps the Others Awake and Britises His Commissions with the Cook After Midday, Steep, "If you know of any mistress of a house in this town who thinks her servants are not what they should be, perhaps it might smooth matters a little for her to let her know what they are in the West Indies. Yes, come to think of it, I am sure it would make her feel better to know how very much worse they average there than they do here. If you feel inclined, I'll tell you some more about those West Indian servants."

A Sun reporter was talking again with the New York banam dealer who recently returned from the West Indies. It was the reporter who always feels inclined to hear a good story, and at this invitation he took out his mental tablets.

"You must remember," the speaker continued, "what I've told you before, that a household that would need one or two servants here at home must have at least six down there, and the them must have at least six down there, are not the two tory; but boys don't count for much, as they can be had in shoals for about \$3 a month. Then the laundress may want an assistant, and unless you are careful the gardener will soon have an assistant too.

"How does a stranger find all these servants is but in a servant in the laundress may want an assistant, and unless you are careful the gardener will soon have an assistant too.

"How does a stranger find all these servants in the Laundress has continued in much you wonder. Ho doesn't have be decided the marketting, if set the table, and want if perhaps you wonder. Ho doesn't have being the first the first the first the proper is a halfpenny, worth two cents in our money. A small the proper is a halfpenny, worth the one of the day's proper is a halfpenny, worth the colony in the morning buying things in such small quantities, and buying things in such small quantities, and buy in the proper in the market in the proper in the

two born host loys don't count for much, as they one be and in sheat for should be a most in the problem of a position, and it was considered and the minutes and the same of the same of

CURES FOR DRUNKENNESS.

PHYSICIANS TREAT THE HABIT AS A PHYSICAL DISEASE.

Except in the Last Stages, It Can Be Curet
-- Way Moral Appeals Pall--Tonic Tread
ment and Excepts of Will Fower Needs It is a subject both pathetic and important which a young New York city woman broaches

in this brief and characteristic note: To the Edition of Tim Sun. Str.: I take your paper overy Sauday, and my brother reads it overy day. I would like to make a suggestion: For the benefit of hundreds of young men who drink and would like to top but cannot, please have an article written on "Drinking and the Way to Stop It." Such an article would attract widespread interest.

8. P. L.

The most cheering feature of this particular theme is that expert medical authorities agree that, except in its last stages, what is now called the drinking habit and classed as a disease can be cured and the taste for liquos eradicated. How to accomplish this cure has been classed by students of inebriety as one of the "gravest social problems of the times." Dr. E. P. Arnold, a member of the American Society for the Study of Inebriety, in a recent article in the North American Review, put the case succinetal

"Public interest in the subject has been shown for years by the many temperance reform organizations, and more recently by the formathe suppression of intemperance by legislative enactment. It must be admitted that thus far these movements have been more or less failures. The reason for these failures is obvious. The